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## IN THE CLAIMS

Please replace all prior versions, and listings, of claims in the application with the following list of claims:

1. (Original) A method of increasing throughput of a server capable of servicing at least one TCP/IP connection with a client, the server creating a TCP/IP Transmission Control Block (TCB) stored in non-paged pool (NPP) memory containing information required to identify and to service the client connection, comprising the steps of:

closing a TCP/IP connection;

excluding information from the TCB not required to identify the client connection to form a timed-wait state TCB (TWTCB) for a time-wait period; and

releasing the NPP memory containing the information required to service the client connection.

- 2. (Original) The method of claim 1, wherein the step of excluding comprises the step of copying the information required to identify the client connection to form the TWTCB.
- 3. (Original) The method of claim 2, wherein the step of releasing the NPP memory containing the information required to service the client connection includes the step of releasing the NPP memory of the TCB required to identify the client connection.
- 4. (Original) The method of claim 1, wherein the step of excluding information not required to identify the client connection to form the TWTCB comprises the step of maintaining a minimum of information necessary to avoid late-routed packets forming new connections on the server.
- 5. (Currently Amended) The method of claim 1, wherein the step of excluding information not required to identify the client connection to form a TWTCB <u>further</u> comprises the step of establishing a TWTCB of the following structure:

struct TWTCB {

#ifdef DEBUG

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**}**;

```
twtcb sig;
   ulong
#endif
                           *twtcb next;
   struct TWTCB
                                  //Destination IP address.
   IPAddr
             twtcb daddr;
                                  //Destination port.
             twtcb dport;
   ushort
             twtcb sport;
                                  //Source port.
   ushort
             twtcb_partition;
   uint
             twtcb delta;
   ushort
   ushort
             twtcb rexmittimer;
             twtcb TWQueue;
                                  //Place to hold all the timed waits
   Queue
             twtcb flags:
   uint
             twtcb saddr;
                                  //Source IP address.
   IPAddr
   SeaNum
             twtcb senduna;
#if 0 // TRIM TWTCBREMOVE
   SeqNum twtcb sendnext;
#else
   struct TWTCB
                           *twtcb prev
#endif
   SegNum twtcb rcvnext;
                                  //Precomputed pseudo-header xsum.
             twtcb phxsum;
   uint
   DEFINE LOCK STRUCTURE(twtcb lock)
             twtcb refcnt;
   //ulong
   //SeqNum twtcb sendmax;
   //uchar
             twtcb state;
                                  //State of this TCB.
                                         //RCE for this connection.
   //RouteCacheEntry
                           *twtcb rce;
```

6. (Currently Amended) The method of claim 1, wherein the step of excluding information not required to identify the client connection to form a TWTCB <u>further</u> comprises the step of establishing a TWTCB of the following structure:

```
struct TWTCB {
#ifdef DEBUG
   ulong
              twtcb sig;
#endif
   struct TWTCB
                             *twtcb next;
              twtcb daddr;
                                   //Destination IP address.
   IPAddr
   ushort
              twtcb dport;
                                   //Destination port.
                                   //Source port.
              twtcb sport;
   ushort
              twtcb delta;
   ushort
              twtcb rexmittimer;
   ushort
   IPAddr
              twtcb saddr;
                                   //Source IP address.
              twtcb refent;
   //ulong
```

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```
//SeqNum twtcb_sendmax;
//uchar twtcb_state; //State of this TCB.
//RouteCacheEntry *twtcb_rce; //RCE for this connection.
};
```

- 7. (Original) The method of claim 1, wherein the step of excluding information not required to identify the client connection comprises the step of forming a TWTCB that occupies less memory than the TCB.
- 8. (Original) The method of claim 7, wherein the step of forming a TWTCB that occupies less memory than the TCB comprises the step of forming a TWTCB that occupies approximately 96 bytes of memory.
- 9. (Original) The method of claim 7, wherein the step of forming a TWTCB that occupies less memory than the TCB comprises the step of forming a TWTCB that occupies approximately 64 bytes of memory.
- 10. (Original) The method of claim 7, wherein the step of forming a TWTCB that occupies less memory than the TCB comprises the step of forming a TWTCB that occupies approximately a single cache line.
- 11. (Original) A method for increasing the throughput of a server capable of servicing at least one TCP/IP connection, the server establishing a TCP/IP Transmission Control Block (TCB) of a size and containing information sufficient to identify and service the connection, comprising the steps of:

closing the at least one TCP/IP connection; forming a Timed-Wait TCB (TWTCB) of a size less than the TCB; and releasing the TCB for use by the server.

12. (Original) The method of claim 11, wherein the step of forming a TWTCB comprises the step of copying a portion of the information of the TCB, the portion of information

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being sufficient to identify the TCP/IP connection to prevent late routed packets from forming new connections.

- 13. (Original) The method of claim 12, wherein the TCB occupies approximately 440 bytes of memory, and wherein the step of forming a TWTCB comprises the step of forming a TWTCB that occupies approximately 206 bytes of memory.
- 14. (Original) The method of claim 12, wherein the TCB occupies approximately 440 bytes of memory, and wherein the step of forming a TWTCB comprises the step of forming a TWTCB that occupies approximately 32 bytes of memory.
- 15. (Currently Amended) The method of claim 11, wherein the step of forming a TWTCB <u>further</u> comprises the step of forming a TWTCB having the following structure:

```
struct TWTCB {
#ifdef DEBUG
             twtcb_sig;
   ulong
#endif
   struct TWTCB
                           *twtcb next;
                                 //Destination IP address.
             twtcb_daddr;
   IPAddr
             twtcb dport;
                                 //Destination port.
   ushort
   ushort
             twtcb sport;
                                 //Source port.
             twtcb partition;
   uint
             twtcb delta;
   ushort
   ushort
             twtcb rexmittimer;
             twtcb TWQueue;
                                 //Place to hold all the timed_waits
   Queue
             twtcb flags;
   uint
                                 //Source IP address.
   IPAddr
             twtcb saddr;
   SegNum twtcb senduna;
#if 0 // TRIM TWTCBREMOVE
   SegNum twtcb sendnext;
#else
                           *twtcb prev
   struct TWTCB
#endif
   SeaNum twtcb rcvnext;
                                 //Precomputed pseudo-header xsum.
   uint
             twtcb phxsum;
   DEFINE LOCK STRUCTURE(twtcb lock)
             twtcb refcnt;
   //ulong
   //SeqNum twtcb sendmax;
```

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struct TWTCB {

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**}**;

```
//uchar twtcb_state; //State of this TCB.
//RouteCacheEntry *twtcb_rce; //RCE for this connection.
};
```

16. (Currently Amended) The method of claim 11, wherein the step of forming a TWTCB further comprises the step of forming a TWTCB having the following structure:

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```
#ifdef DEBUG
              twtcb sig;
   ulong
#endif
   struct TWTCB
                            *twtcb next;
                                   //Destination IP address.
              twtcb daddr;
   IPAddr
                                   //Destination port.
   ushort
              twtcb dport;
                                   //Source port.
              twtcb sport;
   ushort
       ushort twtcb delta;
   ushort
              twtcb rexmittimer;
                                   //Source IP address.
              twtcb saddr;
   IPAddr
   //ulong
              twtcb refcnt;
   //SeqNum twtcb sendmax;
              twtcb state;
                                   //State of this TCB.
   //uchar
                                          //RCE for this connection.
   //RouteCacheEntry
                            *twtcb rce;
```

- 17. (Original) The method of claim 11, wherein the step of forming a TWTCB comprises the step of copying a portion of the information of the TCB, the portion of information being insufficient to service the TCP/IP connection.
- 18. (Original) A computer readable medium having computer-executable instructions for performing steps, comprising:

closing a TCP/IP connection;

copying less than all information stored in a TCP/IP Transmission Control Block (TCB) into a Timed-Wait TCB (TWTCB); and

maintaining the TWTCB for a timed wait period to avoid late routed packets from establishing a new connection with a server.

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19. (Original) The computer-readable medium of claim 18, wherein the step of copying less than all the information stored in a TCB into a TWTCB comprises the step of copying information sufficient to uniquely identify the TCP/IP connection.

- 20. (Original) The computer-readable medium of claim 18, further comprising the step of releasing memory used to store the TCB for use by the server after the step of copying less than all of the information stored in the TCB into a TWTCB.
- 21. (Original) The computer-readable medium of claim 18, wherein the step of copying less than all the information stored in a TCB into a TWTCB results in a structure for the TWTCB that fits on one cache line.
- 22. (Currently Amended) A computer-readable medium having stored thereon a data structure, consisting essentially of: wherein the data structure contains a number of computer-executable instructions, that, when executed on a computer, exclude information not required to identify a client connection, the data structure comprising:

```
struct TWTCB {
#ifdef DEBUG
   ulong
             twtcb sig;
#endif
                           *twtcb next;
   struct TWTCB
                                  //Destination IP address.
   IPAddr
             twtcb daddr;
                                  //Destination port.
             twtcb dport;
   ushort
                                  //Source port.
   ushort
             twtcb sport;
   uint
             twtcb partition;
             twtcb delta;
   ushort
             twtcb rexmittimer;
   ushort
                                  //Place to hold all the timed waits
   Oueue
             twtcb TWQueue;
             twtcb flags;
   uint
             twtcb saddr;
                                  //Source IP address.
   IPAddr
             twtcb senduna;
   SeqNum
#if 0 // TRIM TWTCBREMOVE
   SeqNum twtcb sendnext;
#else
                           *twtcb prev
   struct TWTCB
#endif
   SeqNum twtcb rcvnext;
```

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**}**;

```
uint twtcb_phxsum; //Precomputed pseudo-header xsum.

DEFINE_LOCK_STRUCTURE(twtcb_lock)

//ulong twtcb_refcnt;
//SeqNum twtcb_sendmax;
//uchar twtcb_state; //State of this TCB.
//RouteCacheEntry *twtcb_rce; //RCE for this connection.
};
```

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23. (Currently Amended) A computer-readable medium having stored thereon a data structure, consisting essentially of: wherein the data structure contains a number of computer-executable instructions, that, when executed on a computer, exclude information not required to identify a client connection, the data structure comprising:

```
struct TWTCB {
#ifdef DEBUG
   ulong
              twtcb sig;
#endif
                            *twtcb next;
   struct TWTCB
              twtcb_daddr;
                                   //Destination IP address.
   IPAddr
                                   //Destination port.
              twtcb dport;
   ushort
              twtcb sport;
                                   //Source port.
   ushort
       ushort twtcb delta;
              twtcb rexmittimer;
   ushort
              twtcb_saddr;
                                   //Source IP address.
   IPAddr
              twtcb refcnt;
   //ulong
   //SeqNum twtcb sendmax;
                                   //State of this TCB.
   //uchar
              twtcb state;
                            *twtcb rce; //RCE for this connection.
   //RouteCacheEntry
```